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Incorporating Frostig and Kephart Principles in Curriculum for Mentally Handicapped.

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Educable mentally handicapped children, having perceptual retardation and immaturity in common, are taught through a combination of perceptual development programs, including the Frostig and Kephart approaches. Using basic learning principles as guidelines, instruction combines diagnostic and prescriptive teaching in individual instruction. Success of perceptual materials with these children, criticisms of teacher misuse of the materials, and specific classroom methods are described. The conclusion is reached that if teachers are to develop social and vocational competencies in mentally handicapped students they should study perceptual programs in order to be able to instill the sensory approach of such materials in the classroom. References are included. (MD)

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"INCORPORATING FROSTIG AND KEPHART PRINCIPLES IN CURRICULUM FOR MENTALLY HANDICAPPED."

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Perceptual training utilizing the Frostig and Kephart principles to facilitate learning experiences within the total curriculum of the mentally handicapped children and youth is the focal point of this paper and demonstration. This discussion will be interspersed by brief segments of video tapes of children and teachers in their classrooms for educable mentally handicapped in Rackham School, Eastern Michigan University, Ypsilanti, Michigan and Sttottlemeyer School, Wayne, Michigan. The segments of tapes that have been edited for showing to you this afternoon are those which demonstrate the obvious incorporation of the principles of Kephart and Frostig, hoping that you will understand that these same principles are reinforced in many subtle ways throughout the day.

The assumption is made that the basic principles of The Frostig Program for the Development of Visual Perception and The Kephart Theory of Perceptual-Motor Sequential Learning Stages are understood. It is appropriate, however, to give these as a frame of reference.

The Frostig Program for the Development of Visual Perception:

> "Perception is one of the prime psychological functions. It is the bridge between the human being and his environment, and without perception all but the simplest body functions, such as breathing and elimination, would stop and survival would be impossible.
>
> Definitions of perception vary according to the point of view of the user of the term. For the purposes of this program, perception is defined as the ability to recognize stimuli. This ability includes not only the reception of sensory impressions from the outside world and from one's own body, but the capacity to interpret and identify the sensory impressions by correlating them with previous experiences. This recognition and inte-

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gration of stimuli is a process that occurs in the brain, not in the receiving organ, such as the ear or the eye. In perceiving these four lines, for instance, the sensory perception of them occurs in the eye, but the recognition of them as a square occurs in the brain." "Both the test and the work sheets focus on the five visual perceptual abilities that seem to have the greatest relevance to academic development. These five abilities are: (1) perception of position in space. (2) perception of spatial relationships, (3) perceptual constancy, (4) visual-motor coordination, and, (5) figure-ground perception.

The ability to differentiate letters that have the same form but differ in their position--such as b and d -- and the ability to recognize the sequence of words in a sentence depends upon normal development of perception of position in space and of spatial relationships."

The Kephart Theory of Perceptual-Motor Sequential Learning Stages:

"The essence of the perceptual-motor theory is a sequence of learning stages through which the child progresses. Later complex learnings are built upon initial learnings in a hierarchical fashion. The developmental sequence is presented in outline in Figure 1.

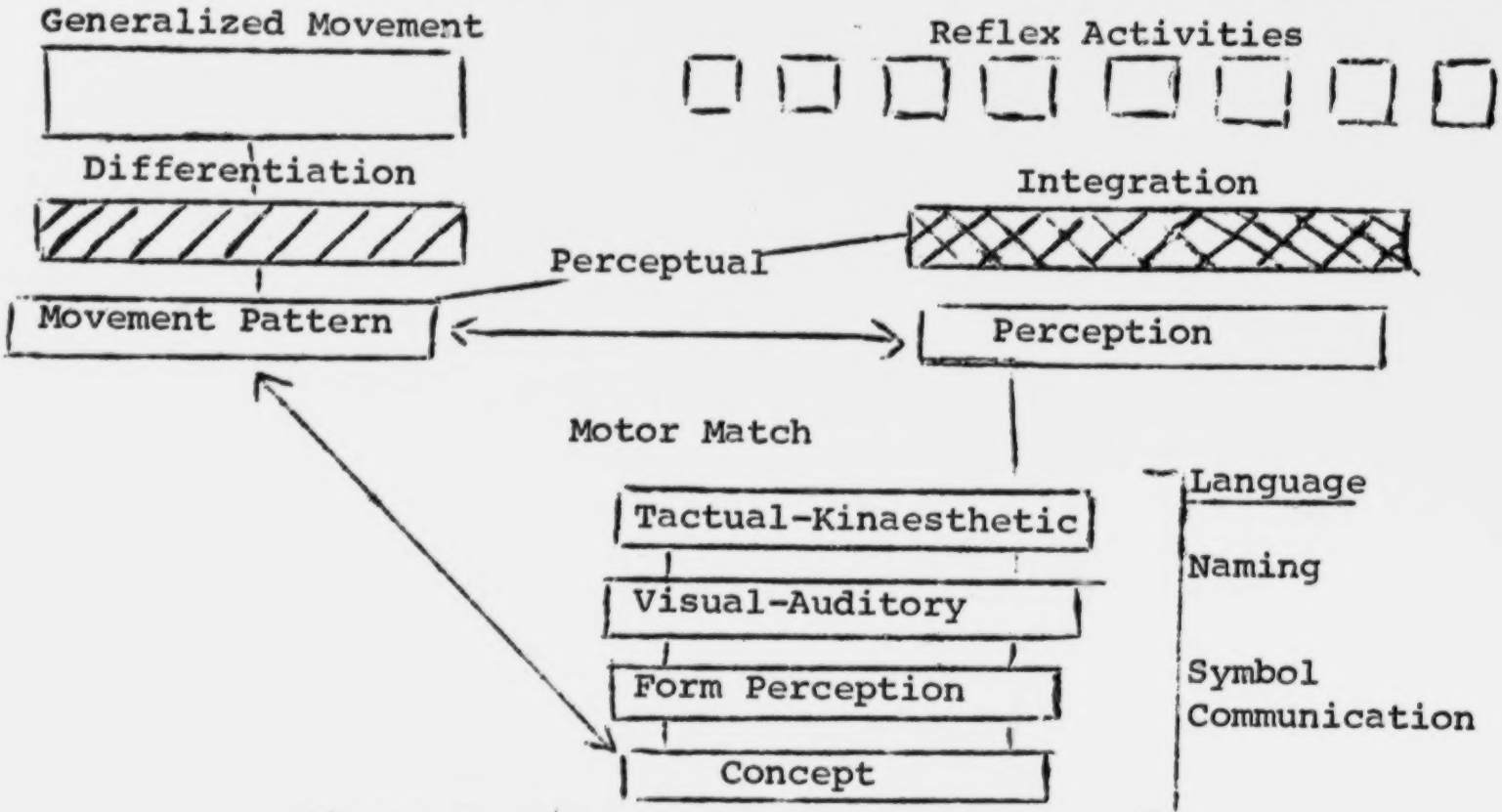

Figure 1. Theoretical Constructs

Perceptual Training For the Mentally Handicapped:

Children and youth enrolled in our classrooms for the mentally handicapped have some commonalities. The most widespread being in the area of perceptual problems or deficits. There will be perceptual retardation and usually perceptual immaturity. Then, there is an increasing awareness of the prevalence of perceptual distortion and disturbance. The era of a group of "plodding, comfortable, educable retarded youth" comprising the population of one of our classrooms ended some years ago.

The recognition of these additional deficits and problems in perception and comprehension has been a challenge to those who enjoy changing behavior by applying the basic principles of learning. For the purpose of this paper, the five more basic principles are listed:

1. The first principle is that teaching effort is most effective when the learning has basic understanding of established goals and sees the relationship between what is taught and those goals.
2. A second basic understanding about directing learning of children is that a teacher must consider individual differences.
3. A third basic principle of teaching children is to present the skills or understanding in situations similar to those in which they will be used.
4. A fourth basic principle of teaching is that concepts are best established by using many first-hand perceptual experiences.
5. A fifth basic principle has been implied in the other four but for the purpose of emphasis should be noted by itself. It is simply that learning to be retained must be used.

Curriculum for the Mentally Handicapped:

The curriculum for the mentally handicapped is divided into skill and content or utilitarian areas:

Skills:

Language Arts
Arithmetical Concepts and Computation
Physical Education
Sensory Training

Content:

Social Studies and Science
Recreation and Leisure Time
The Arts
Health (Physical and Mental)

This breakdown of the curriculum lends itself to diagnostic and prescriptive teaching for developmental learning. This enables each child to learn skills, practice these skills, and, then, to utilize these skills in a purposeful situation. The knowledge given these children and youth during Skills becomes their very own when given an opportunity to become self-involved in all the problem-solving experiences presented in the content areas. It should be emphasized that motivation for learning the skills is engendered through need for them in the content areas. And the desire for additional knowledge comes from successful utilization of present knowledge.

Daily Activities to Train Abilities:

Routine activities can become learning situations when the creative teacher capitalizes on every opportunity. Think of the abilities being trained during these times during the day:

Pledge to the flag (right hand)
Planning for the day, week, or possibly month
Calendar - (teacher constructed)
Finding the day of the week, day of the month.
What day is this? How many more?
How many days before we swim, bowl, go camping, have a party?
Schedule
Review subjects with reference to time

Duties
  Finding names with duty for the day on chart
Personal "readiness for school" check in mirror
  (body image, schema)
Recreation
  Dressing for outside activity
      Right boot on right foot
      Right arm in right sleeve of jacket
      All other functions
  Listening for directions
      "Everyone on the west side line up."
      "Everyone wearing brown slacks line up."
      "Now everyone with two eyes and ten toes line up!"
Lunch
 The standards of middle class guarantees that appropriateness of food and manners must be observed but also body awareness, sequencing, figure ground, and constancy.

All this and more is part of every child's school day and should require conceptualization to occur so that perceptual training becomes a part of the routine.

Language arts and arithmetical concepts and computation are obviously conducive to the incorporation of these principles. Some of the materials currently being used successfully are Catherine Stern's Structural Arithmetic, Cuisinaire Arithmetic Rods, Peabody Language Development Kits, Ginn and Co.'s Language Kit, Montessori Materials, Teaching Resources, Inc. Materials, Keystone Materials, Stanwix House, and Phonovisual. It must be kept in mind that the presence of any or all of these materials in the classroom will not insure the sensory training approach to teaching. The teacher must free herself from this ever present bond with textbooks and workbooks. It can be noted that many teachers are prostituting the Frostig Program with the workbooks that every child can have. Observation and evaluation show that many teachers are promoting a two dimensional program expecting results that are totally un-

realistic.

The experience chart method still seems to be the most effective method for removing the abstract from reading. The teacher is recording in print the child's ideas as given orally in words, phrases, sentences and paragraphs. Some of the values are:

1. Children see left to right movement
2. Children see correct formation of letters and spacing
3. Children see letters make their words
4. Children see their words form a gestalt into a sentence
5. Children see their sentences make a paragraph
6. Children see their paragraphs become stories
7. Grammar becomes functional

All areas of structural analysis of words are available for teaching and learning during this process. Through these experiences he is also being trained in all the areas from position in space through ocular pursuits and learning in the areas of word recognition and comprehension.

i/t/a, Phonovisual, and the Fernald Methods have been successful with many disabled readers who are also mentally handicapped. It is believed by some that the sensory training that must accompany these methods plays a significant role. The necessity to train auditory discrimination and comprehension with the reading program in these three methods along with recognition of letters is one of the keys that unlocks the door for this symbolic behavior.

Vocabulary lists for arithmetical concepts have been compiled and published in several books. The most complete seems to be the one in the Illinois Curriculum Guide for Teachers of Educable Mentally Retarded. A sample of this vocabulary list is as follows:

Primary	Intermediate	Advanced
Location Terms	**Location Terms**	**Location Terms**
under-over		
bottom-top		
first-last		
high-low		
middle	middle	
above-below	above-below	
far-near	far-near	far-near
in front of-behind	in front of-behind	in front of-behind
begin-end	begin-end	begin-end
beside	beside	beside
around	around	around
left-right	left-right	left-right
	center	center
	edge	edge
		story (floor of building)
		scale of mileage
Comparative Terms	**Comparative Terms**	**Comparative Terms**
young-er	young-er-est	
old-er	older-est	
few-er	few-er-est	few-er-est
	less	less-er
	cheap-er	cheap-er-est
	larger-smaller	larger-smaller
	longer-short	longer-shorter
	more or less	more or less

To teach these concepts there must be child involvement. Is there any method for teaching near-nearer-nearest that would exclude perceptual training within the confines of the environment.

Physical education and Sensory Training should be diagnostic and prescriptive to meet individual differences. The Purdue Survey, the Frostig Test, Ayers Battery of Tests for Cerebral Dysfunction, Wepman Auditory Discrimination, Peabody Picture Vocabulary Test, the ITPA (Illinois Test of Psycholinguistic Abilities, Bender-Gestalt, and WISC will profile children and youth so that abilities and disabilities are discernible. These

evaluative tools and teacher observation are the first steps for diagnosing and prescribing for training. The skill of skipping, running, throwing, catching, rolling and all the others should be trained during this time rather than stopping the games during Recreation and Leisure Time to give one child individual instruction. The popular game of "Duck, Duck, Goose" can become disinteresting to thirteen (13) children when one or two children do not know when to run, how to run, and which way to run - it usually this last problem that discourages children most (the child who has not established directionality). Why are some youth never chosen on the team?

Incorporating the principles of Frostig and Kephart into the learning activities of Social Studies and Science is almost impossible to avoid. The list of broad subject areas for units of study for the mentally handicapped gives a frame of reference for exploration of the subject areas needed for successful living. Your attention is directed to the excellent paper delivered at the CEC Convention in 1967 on "Teaching the Social Studies Unit" by Dr. Laura E. Jordan.

AREAS OF LEARNING THROUGH UNITS OF STUDY:

GROUP I

1. Food
2. Shelter
3. Clothing
4. Communication
5. Transportation
6. Homemaking
7. Community
8. Family
9. Safety
10. Practical Science

GROUP II

1. Health
2. Holidays
3. Geography
4. Science
5. Leisure Time
6. History
7. The Arts
8. Different Cultures
9. Conservation
10. Time
11. Money

These questions are answered by Activities, Observation, Study and Evaluation:

1. Where?
2. When?
3. How?
4. Who?
5. Why?
6. What?

Think of the abilities being trained by searching for the answer to these questions in regard to any one of the subject areas and their subheadings.

TRANSPORTATION

Where?

Maps
Puzzles
Trips

Position in space
Spacial relationships
Constancy
Visual-motor
Figure ground

When?

Schedules
Clock
Calendar

All of above

How?	Who?	Why?	What?
Pictures		Field trips	All of above
Models		Library books	
Real media		Children's	
Films		Adult	
Film strips		Travel Folders	
Role playing		Records	
Singing		Tapes	
Dancing		Bulletin Board	
Choral reading		Creative Writing	
Slides		Experience Charts	
Tapes		Individual stories	
Arts and crafts		Teacher-made charts	
Purchasing tickets		and books	
Care of ticket		Resource persons	
Writing checks		representing jobs	
Budgeting		Clocks	
		Newspapers	

Is it possible to dramatize an engineer, truck driver or an astronaut without utilizing visual-motor coordination?

Is it possible to sing "Down by the Station" without utilizing position in space?

Is it possible to view slides, films, film strips, pictures, and the real media without training for constancy?

Is it possible to purposefully listen to tapes and records then compare the sounds with the real media without training for spatial relationships and constancy?

The answer, of course, is obviously no.

It must be evident now that a choice of any one of the subject areas in Group I will incorporate knowledge from all subject areas of Group II. The teacher, therefore, must be discriminating in her goals and choice of activities, and, then allow children to learn.

Retarded youth must be given an opportunity to apply the learned skills in functional problem solving situations so that lasting imprinting will be effected. The problem of transfer of knowledge from situation to situation decreases when first hand perceptual experiences become the primary teaching tool. It is rewarding when the mentally retarded will say during Skills that he must learn how to perform a given skill so that he can function in the Content Areas. Examples:

> Wayne had been working on balancing with interest but not purpose until he wanted to succeed in participation in the "Limbo" Motivation for this made all activities in Physical Education pruposeful.
>
> Bobby, age 15, had succeeded in swimming, bicycling, and fishing but when golfing with his father became a reality, his need for special training in eye-hand coordination became a necessity. He and his father requested a prescription for activities to give him the necessary skill.

The Question of When?

It is recommended that the schedule for Mentally Handicapped be organized in blocks of time.

Primary 5-9 yrs

a.m.
- 15 min. Planning for the day and news
- 30 min. Skills - Language arts and Arithmetic
- 30 min. Social Studies or Science
- 30 min. Physical Education or Recreation
- 60 min. Health, Independent Living, and Lunch

p.m.
- 30 min. Skills - Language Arts and Arithmetic
- 30 min. Social Studies or Science
- 30 min. Physical Education or Recreation
- 30 min. The Arts
- 30 min. Sensory Training

Late Elementary 10-13 yrs

a.m.
- 15 min. Planning the day and news
- 60 min. Skills - Language Arts and and Arithmetic
- 30 min. Physical Education or Recreation
- 60 min. Social Studies or Science
- 60 min. Health, Independent Living, and Lunch

p.m.
- 30 min. Skills Language Arts and Arithmetic
- 30 min. Physical Education or Recreation
- 30 min. The Arts
- 30 min. Sensory Training

Junior and Senior High

As similar to Later Elementary as possible realizing that the older the retardate the more independent he will function.

Conclusion

Teachers of the mentally handicapped of our nation must develop a philosophy of reason for educating these individuals. Our objectives should be toward developing social and vocational competencies. It seems appropriate that teachers "saturate" themselves with the philosophies of Kephart, Frostig, Gettman, Myklebust, and Ayers so that the sensory approach is evident in the curricula offered the mentally handicapped.

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